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EXAMINER				
PILKINGTON, JAMES				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/573,390

**Applicant(s)**

BAYER ET AL.

**Examiner**

JAMES PILKINGTON

**Art Unit**

3656

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 April 2006.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-23 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 22 March 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☒ Notice of Draftperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date 3/22/06  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered. Page 3 of the Specification lists US 3,65,592 which does not appear in the IDS (this also appears to be typographical error).

### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the distances between the axis of rotation and the run-on surface become smaller as they become increasingly axially remote from a center of the pocket (clm 2) and the second flange being further from the rotational axis than the first flange (clm 16) must be shown or the feature(s) canceled from the claim(s). The drawings only show the opposite of this. No new matter should be entered.

3. New corrected drawings are required in this application because fail to comply with 37 CFR 1.84(l), which requires uniformly thick and defined lines letters and numbers.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended

replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

4. Claim 4 is objected to because of the following informalities: Line 3 "directions" should be - - direction - -. Appropriate correction is required.
5. Claim 14 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 14 repeats the end of claim 12 from which it ultimately depends.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re clms 1-23, the claims appear to be a direct translation of the PCT and/or foreign priority documents and are replete with grammatically incorrect and indefinite language. Below a few such problems are indicated, however, the Examiner suggest that the Applicant write the claims in accordance with 37 CFR 1.75 to render clear what the Applicant regards as their invention.

Re clm 1, it is not clear what which way the run-on surfaces slopes since a frame of reference has not been established for "a furthest distance between the axis of rotation and the run-on surface." Is the "furthest distance" located near the center of the bearing or on one of the outer sides of the bearing rings?

Re clms 1, 16 and 17, the phrases "an imaginary longitudinal section," "an imaginary hollow truncated cone" and "an imaginary parting plane" render the claims unclear. If the device is real wouldn't it have all of these components? Therefore, by claiming "an imaginary" component it is not clear if the device is real or not.

Re clm 5, it is not clear what the Applicant is claiming. It appears that the Applicant is claiming that the guiding surfaces is inclined in one direction and the run-on surface is inclined in the opposite direction ("the distances become greater as they [guiding surface] become increasingly axially remote from the smallest by the amount by which the radial distances between the run-one surface and the axis of rotation

become smaller"). How is this possible? It is believed that the Applicant is attempting to claim that the slopes of the run-one surface and the guiding surface match and the claim is being examined as such.

Claim 7 recites the limitation "the contour line" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Re clm 15, it is not clear how two mutually opposite sub-portions (inner portion of pocket) can be less than a smallest possible diameter of the ball and the ball still fit in the pocket. Is the Applicant attempting to claim that the top of the pocket is tapered inward?

Re clm 16, it is not clear what the Applicant is attempting to claim by the limitation "an imaginary hollow truncated cone." Is the Applicant attempting to claim a profile of the pocket?

Re clm 17, it is not clear how the second flange can be higher than the first when it was previously claimed that the first flange has the run-on surface which must be higher than the second flange in order to meet the limitation of the claims. It appears that the Applicant is jumping between the species shown and a species not shown. The claim is being examined in relation to the drawing figure 1.

Re clm 21, it is not understood what the Applicant is attempting to claim by the limitation "and in that the gap size is less than a smallest possible further radial gap size between the second flange and the shoulder." In addition the reference characters provided in this section of the claim do not match with that shown in the figures since

there is no gap between the second flange (12) and the shoulder (8) since these two parts are not in alignment.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1 and 21, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Sato, JP2001-140870 (cited by Applicant).

Re clm 1, Sato teaches a ball bearing (see Figures 1 and 4) with a bearing ring (11,12) and with a cage (14) and also with at least one run-on surface (inclined surface on ring 14) on the bearing ring (12), the cage (14) being provided with pockets (18) which are adjacent one another peripherally about an axis of rotation of the ball bearing and each of the pockets (18) thereby being at least partly delimited in an axial first direction, in the same direction-as the axis of rotation, by a first flange (left side of cage) and in at least one second direction, counter to the first direction, by a second flange (right side of cage), and at least one of the flanges (right side of cage) being delimited in a radial direction by a radial guiding surface (top surface of 14) and the guiding surface (top of 14) thereby lying at least radially opposite the run-on surface (inclined surface on 12), characterized in that radial distances (along the incline) between the axis of rotation and the run-on surface (inclined) that define the path of the run-on surface become smaller as they become increasingly axially remote from a furthest distance (furthest

right of incline) between the axis of rotation and the run-on surface, so that the run-on surface slopes down in relation to the axis of rotation in an imaginary longitudinal section viewed along the axis of rotation.

Re clm 21, Sato discloses an angular-contact ball bearing (Figures 2 and 4) with a bearing ring (11, 12) and a cage (14) and also with at least one annularly formed run-on surface (incline on 12) on the bearing ring (12), the cage (14) being provided with pockets (18) which are adjacent one another peripherally about an axis of rotation of the cage (14) and each of the pockets (18) thereby being at least partly delimited in an axial first direction, in the same direction as the axis of rotation, by a first flange (right side of cage) and in at least one second direction, counter to the first direction, by a second flange (left side of cage), and at least the first flange (right side of cage) being delimited in a radial direction by a radial guiding surface (top of 14) and the guiding surface (top of 14) thereby lying at least radially opposite the run-on surface (incline in 12) and the second flange (left of cage) thereby lying at least radially opposite a shoulder (left of ring 12) on the bearing ring (12), characterized in that a smallest possible radial gap size between the guiding surface (top of 14) and the run-on surface (incline in 12) is greater than zero, the smallest possible radial gap size being a smallest operating play between the rotating cage (14) in an operating state of the angular-contact ball bearing, and in that the gap size is less than a smallest possible further radial-gap size between the second flange (left of cage) and the shoulder (see Figures 1 and 4).



10. Claims 21 and 22, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Tada, US PGPub 2002/0110298.

Tada discloses an angular-contact ball bearing (see Figure 7) with a bearing ring (3) and a cage (5) and also with at least one annularly formed run-on surface (inside surface of 3 not including the raceway) on the bearing ring (3), the cage (5) being provided with pockets (holding 4) which are adjacent one another peripherally about an axis of rotation of the cage (5) and each of the pockets (holding 4) thereby being at least partly delimited in an axial first direction, in the same direction as the axis of rotation, by a first flange (left or right of cage) and in at least one second direction, counter to the first direction, by a second flange (the other of the left or right of cage), and at least the first flange (left of cage) being delimited in a radial direction by a radial guiding surface (top of cage) and the guiding surface (top of cage) thereby lying at least radially opposite the run-on surface (inner surface of 3) and the second flange (right of cage) thereby lying at least radially opposite a shoulder (prior to angled surface on 3 making contact with the ball) on the bearing ring (3), characterized in that a smallest possible radial gap size between the guiding surface (top of cage on left) and the run-on surface (inner surface of 3) is greater than zero, the smallest possible radial gap size being a smallest operating play between the rotating cage (5) in an operating state of the angular-contact ball bearing (2), and in that the gap size is less than a smallest possible further radial-gap size between the second flange (right of cage) and the shoulder, the gap size is formed in a size equal to or greater than four micrometers to equal to or

greater than eight micrometers (Tada discloses a minimum gap of 0.3mm see paragraph 0051).

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1 and 3-7, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Negele, USP 4,391,476, in view of Bonengel, USP 4,560,291.

Negele discloses a bearing with a bearing ring (1,2) and with a cage (5) and also with at least one run-on surface (near 7) on the bearing ring (1), the cage (5) being provided with pockets (holding 6) which are adjacent one another peripherally about an axis of rotation (see Fig. 3) of the bearing and each of the pockets (holding 6) thereby being at least partly delimited in an axial first direction, in the same direction-as the axis of rotation, by a first flange (at 9) and in at least one second direction, counter to the first direction, by a second flange (at 14), and at least one of the flanges (at 9) being delimited in a radial direction by a radial guiding surface (10) and the guiding surface (10) thereby lying at least radially opposite the run-on surface (near 7), characterized in that radial distances between the axis of rotation and the run-on surface (near 7) that define the path of the run-on surface (near 7) become smaller as they become increasingly axially remote from a furthest distance between the axis of rotation and the run-on surface (near 7), so that the run-on surface (near 7) slopes down in relation to

the axis of rotation in an imaginary longitudinal section viewed along the axis of rotation (see, Figure 1, the structure of the outer race which makes the run-on surface slopes downward as it travels towards the center of the bearing), the distances between the axis of rotation and the run-on surface (near 7) become smaller as they become decreasingly axially remote from a center of the pocket (holding 6, incline slopes downward and into the bearing), the guiding surface (10) is aligned in the axial direction parallel to the axis of rotation, the slope of the run-on surface (near 7) and the guiding surface (10) are the same (see Figure 1), the guiding surface (10) is facing radially outward and the run-on surface (near 7) is facing radially inward, a contour line (outer surface) of the guiding surface (10) that lies radially closest to the axis of rotation is radially further away from the axis of rotation than a radially outermost contour of the second flange (140 radially furthest away from the axis of rotation (the base of the slope of 10 is further then the top of the other side of the cage from the axis of rotation).

Negele does not disclose that the bearing is a ball bearing.

Bonengel teaches that cages, in particular inclined cages, can be used with balls.

It would have been obvious to one having ordinary skill at the time the invention was made to substitute the rollers of Negele with the balls of Bonengel for the predictable result of reducing the size of the bearing since the axial length of the bearing can be smaller when using balls verses rollers.

13. Claim 2, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Negele '476, in view of Bonengel '291 and further in view of Kern, US PGub 2004/0028306.

Negele in view of Bonengel discloses all of the claimed subject matter as applied above.

Negele in view of Bonengel does not disclose that the distances between the axis of rotation and the run-on surface become smaller as they become increasingly axially remote from a center of the pocket.

Kern teaches a run-on surface (1.3) where the distances become smaller as they become increasingly axially remote from a center of the pocket (holding 4.1, see Figure 2) for the purpose of helping retain the cage in an axial direction.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Negele in view of Bonengel and provide a run-on surface where the distances become smaller as they become increasingly axially remote from a center of the pocket, as taught by Kern, for the purpose of helping retain the cage in an axial direction.

14. Claims 8-10, 12-14, 17-20, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Negele '476, in view of Bonengel '291 and further in view of Tada, USP 2002/0110298.

Negele in view of Bonengel discloses all of the claimed subject matter as applied above. Negele in view of Bonengel further disclose that a smallest possible radial gap

size between the guiding surface (10, Negele) and the run-on surface (near 7) is greater than zero, the smallest possible radial gap size being a smallest operating play between the rotating cage (5) in an operating state of the ball bearing, the gap size is formed in a size equal to or greater than four micrometers to equal to or greater than eight micrometers, the cage (5) is made of plastic (C1/L29-44, used in arrangements where the cage is plastic) and in that at least the second flange (right side of cage) has a sub-portion (left of crosshatching) of an inner surface of an imaginary hollow cylinder that is directed into the pocket (pocket is cylindrical in shape), and in that a pocket angle (formed by the cage arrangement taught by Bonengel) between the center axis of the hollow cylinder and an imaginary line perpendicular in this case to the axis of rotation is less than the contact angle between the line and between a contact line of the ball bearing, the perpendicular line and the contact line intersecting the ball at the center and thereby the contact line intersecting the axis of rotation at an acute angle (the angle is formed in the combination of Negele and Bonengel), the sub-portion (left of crosshatching on right side of cage) is an inner surface delimiting the pocket (holding 6 in Negele) is an inner surface of the hollow cylinder running around annularly in the pocket, the first flange (right of cage) is radially offset in relation to the second flange (right of cage) to such an extent that the radially outermost contour of the first flange is radially furthest away from the axis of rotation, and a radially innermost inner contour of the second flange is lying closest to the axis of rotation, together about an imaginary parting plane (along dashed line in Negele) in the direction of the axis of rotation, the parting plane radially dividing the pocket from the first flange to the second flange, and

in that the parting plane is kept radially at a distance from a pitch radius, the pitch radius describing a common pitch circle of the ball bearing taken through the centers of the balls in the pockets (see Figure 1 Negele), the cage (5, Negele) is recessed at the first flange (see Figure 4), on a side facing away from the pocket (holding 6) and axially terminating the cage (5), axially in the direction of the pocket and, at the guiding surface (10), radially in the direction of the axis of rotation, the cage (5) has a bevel (see Figure 2), running around the axis of rotation 1a), between the guiding surface (10) and the side (left of cage) or the cage (5) has a channel (31), running around the axis of rotation, between the guiding surface (10) and the side (left of cage).

Negele in view of Bonengel does not disclose that the ball bearing is an angular-contact ball bearing, the bearing ring enclosing the cage and thereby having a first shoulder, with the annularly formed run-on surface, and also a second shoulder, the second shoulder lying radially opposite the second flange.

Tada teaches a ball bearing that is an angular-contact ball bearing, the bearing ring (3, Figure 7) enclosing the cage (5) and thereby having a first shoulder (at inclined side of ring where it meets the raceway surface), with the annularly formed run-on surface (inclined surface, and also a second shoulder (at left side where the inner surface of the ring changes to the raceway surface), the second shoulder lying radially opposite the second flange (left of cage) for the purpose providing a bearing and cage assembly that is liable to be stable (paragraphs 0008-0009).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Negele in view of Bonengel and provide for the ball

bearing to be an angular-contact ball bearing, the bearing ring enclosing the cage and thereby having a first shoulder, with the annularly formed run-on surface, and also a second shoulder, the second shoulder lying radially opposite the second flange, as taught by Tada, for the purpose of providing a bearing and cage assembly that is liable to be stable.

15. Claim 11, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Negele '476, in view of Bonengel '291 and further in view of Tada, USP 2002/0110298 and further in view of Sato, JP 2001-140870 (cited by Applicant).

Negele in view of Bonengel and further in view of Tada discloses all of the claimed subject matter above. Negele further discloses the cage (5) is made of plastic (C1/L29-44, used in arrangements where the cage is plastic).

Negele in view of Bonengel and further in view of Tada does not disclose that the guiding surface has, at least in the peripheral direction of the cage radial, spaced-apart depressions.

Sato teaches a guiding surface (14) that has spaced-apart depressions (20) for the purpose of providing an air bearing assembly to help stabilize the cage assembly.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Negele in view of Bonengel and further in view of Tada, and add spaced-apart depressions to the guide surface, as taught by Sato, for the purpose of providing an air bearing assembly to help stabilize the cage assembly.

16. Claims 15 and 16, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Negele '476, in view of Bonengel '291 and further in view of Tada, USP 2002/0110298 and further in view of Tsuji, USP 5,033,878.

Negele in view of Bonengel and further in view of Tada discloses all of the claimed subject matter as applied above.

Negele in view of Bonengel and further in view of Tada does not disclose that the top of the cage, above the center of the ball, is open a distance that is smaller than diameter of the ball (clm 15, as best understood) and the inner surface of the pocket is truncated so that the narrowest point is the distance that is set to be smaller than the diameter of the ball (clm 16, as best understood).

Tsuji teaches a cage wherein the top of the cage (at 23), above the center of the ball, is open a distance that is smaller than diameter of the ball (see Figure 5, distance between tips 23) and the inner surface of the pocket is truncated so that the narrowest point is the distance that is set to be smaller than the diameter of the ball (see Figure 5), for the purpose of preventing the spherical rollers from skewing and improve lubrication effect (C1/L28-30).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Negele in view of Bonengel and further in view of Tada, and provide for the top of the cage, above the center of the ball, to be open a distance that is smaller than diameter of the ball (clm 15, as best understood) and the inner surface of the pocket is truncated so that the narrowest point is the distance that is set to be smaller than the diameter of the ball (clm 16, as best understood), as taught by



Tsuji, for the purpose of preventing the spherical rollers from skewing and improve lubrication effect.

17. Claim 23, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Tada, US PGPub 2002/0110298 in view of Sato, JP2001-140870, and futher in view of Negele, USP 4,391,476.

Tada discloses all of the claimed subject matter as discussed above.

Tada does not disclose the cage is made of plastic and in that the guiding surface has, at least in the peripheral direction of the cage radial, spaced-apart depressions.

Sato teaches a guiding surface (14) that has spaced-apart depressions (20) for the purpose of providing an air bearing assembly to help stabilize the cage assembly.

It would have been obvious to one having ordinary skill in the at the time the invention was made to modify Tada, and add spaded-apart depressions to the guide surface, as taught by Sato, for the purpose of providing an air bearing assembly to help stabilize the cage assembly.

Negele teaches that it is know to make bearing cages out of resin.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Tada in view of Sato and make the bearing out of resin, as disclosed by Negele, to yield the predictable result of prolonging the life of the bearing races (the resin will wear before the races do).

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. **JP2001-140870**, cited by Applicant, appears pertinent to claims 2-19, 22 and 23, in addition to claims 1 and 21, and may or may not meet the limitations being claimed, it is noted that a translation of the document has been requested.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES PILKINGTON whose telephone number is (571)272-5052. The examiner can normally be reached on Monday - Friday 7-3.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571)272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JAMES PILKINGTON/  
Examiner, Art Unit 3656  
1/5/09

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/Richard WL Ridley/  
Supervisory Patent Examiner, Art Unit 3656